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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/491,991	01/26/2000	Dean Cheng	081862.P167	9322

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EXAMINER
TODD, GREGORY G

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 February 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This office action is in response to applicant's amendment and request for

continued examination filed, 03 November 2005, of application filed, with the above

serial number, on 26 January 2000 in which claims 1, 10, 18, 27, 35, 44, 52, and 61

have been amended. Claims 1-68 are therefore pending in the application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-7, 10-15, 18-24, 27-32, 35-41, 44-49, 52-58, and 61-66 are rejected

under 35 U.S.C. 103(a) as being unpatentable over Fukuta et al (hereinafter "Fukuta",

5,090,011) in view of Proctor, Jr. et al (hereinafter "Proctor", 6,563,809).

As per Claims 1, 18, and 52, Fukuta discloses a method, apparatus and a

computer program product, wherein Fukuta discloses:

determining a congestion status associated with a node in the network (at least

col. 4, lines 55-62; col. 7, lines 24 – col. 8 line 38); and

broadcasting the congestion status to at least one other node in the network, the

at least one other node capable of measuring node condition used to indicate node

congestion (at least Fig. 1, 13).

Fukuta fails to explicitly disclose the congestion status notice being broadcast to and associated with a node in one of a single peer group and a hierarchical level. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag indicator, to identify a base station operating in a congested state and states of neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line 21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Proctor's hierarchical broadcasting of such congestion notifications into Fukuta's system as this would enhance Fukata's system so that the congestion notice is sent not only to the source node but, for example, to mobile stations at a lower level and also neighboring base stations within the same peer level in order for affected nodes to be informed and aware of such network properties affecting communication.

As per Claims 2, 19, 36, 53.

measuring a node condition (threshold value) at the node, the node condition corresponding to the congestion status (at least col. 12, lines 1-15).

As per Claims 3, 20, 37, 54.

setting a transit flag, the transit flag being accessible to the at least one other node (at least col. 15, lines 19-26).

As per Claims 4, 12, 21, 29, 38, 46, 55, 63.

the node is one of a transit node and a terminating node (at least Fig. 13).

As per Claims 5, 13, 22, 30, 39, 47, 56, 64.

Fukuta fails to explicitly disclose the node is a logical node in the hierarchical level, the logical node corresponding to a peer group at a next lower level. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag indicator, to identify a base station operating in a congested state and states of neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line 21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of Proctor's hierarchical broadcasting of such congestion notifications into Fukuta's system as this would enhance Fukata's system so that the congestion notice is sent not only to the source node but, for example, to mobile stations at a lower level and also neighboring base stations within the same peer level in order for affected nodes to be informed and aware of such network properties affecting communication.

As per Claims 6, 23, 40, 57.

Fukuta fails to explicitly disclose the at least one other node is one other logical node in the hierarchical level, the one other logical node corresponding to one other peer group at a next lower level. However, the use and advantages for broadcasting such information is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag indicator, to identify a base station operating in a congested state and states of neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line 21; also, col. 4, lines 32-65). Therefore, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to

incorporate the use of Proctor's hierarchical broadcasting of such congestion

notifications into Fukuta's system as this would enhance Fukata's system so that the

congestion notice is sent not only to the source node but, for example, to mobile

stations at a lower level and also neighboring base stations within the same peer level

in order for affected nodes to be informed and aware of such network properties

affecting communication.

As per Claims 7, 15, 24, 32, 41, 49, 58, 66.

the network is an asynchronous mode transfer (ATM) network (at least col. 1,

lines 11-20).

As per Claims 10, 27, and 61, Fukuta discloses a method, apparatus, and a

computer program product to manage congestion in a network, the method comprising:

receiving a congestion status (congestion notice) associated with a node in a

network, the congestion status corresponding to a measured node condition at the node

and being broadcast by the node to at least one other node, the at least one other node

capable of measuring node condition used to indicate node congestion (at least Fig. 1,

13); and

routing a call to the node based on the received congestion status (polling) (at

least Fig. 26; col. 16, lines 21-40).

Fukuta fails to explicitly disclose the congestion status notice being broadcast to

and associated with a node in one of a single peer group and a hierarchical level.

However, the use and advantages for broadcasting such information is well known to

one skilled in the art at the time the invention was made as evidenced by the teachings

of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag

indicator, to identify a base station operating in a congested state and states of

neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line

21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to incorporate the use of Proctor's

hierarchical broadcasting of such congestion notifications into Fukuta's system as this

would enhance Fukata's system so that the congestion notice is sent not only to the

source node but, for example, to mobile stations at a lower level and also neighboring

base stations within the same peer level in order for affected nodes to be informed and

aware of such network properties affecting communication.

As per Claims 11, 28, 45, 62.

accessing a transit flag set by the node, the transit flag corresponding to the

congestion status (at least col. 15, lines 54-64)..

As per Claims 14, 31, 48, 65.

routing the call to the node if the node is a terminating node; and

routing the call to the node if the node is a transit node and the congestion status

indicates that the node is not congested (polling) (at least Fig. 13, 26; col. 16, lines 21-

40).

As per Claim 35, Fukuta discloses a system interfacing to a network wherein

Fukuta discloses:

a processor coupled to the network (at least col. 15, lines 19-26); and

a memory coupled to the processor (at least col. 15, lines 19-26), the memory

managing congestion in the network, when executed causing the processor to:

determine a congestion status associated with a node the network (at

least col. 4, lines 55-62; col. 7, lines 39-47); and

broadcasting the congestion status to at least one other node in the

network, the at least one other node capable of measuring node condition used

to indicate node congestion (at least Fig. 1, 13).

Fukuta fails to explicitly disclose the congestion status notice being broadcast to

and associated with a node in one of a single peer group and a hierarchical level.

However, the use and advantages for broadcasting such information is well known to

one skilled in the art at the time the invention was made as evidenced by the teachings

of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag

indicator, to identify a base station operating in a congested state and states of

neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line

21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to incorporate the use of Proctor's

hierarchical broadcasting of such congestion notifications into Fukuta's system as this

would enhance Fukata's system so that the congestion notice is sent not only to the

source node but, for example, to mobile stations at a lower level and also neighboring

base stations within the same peer level in order for affected nodes to be informed and

aware of such network properties affecting communication.

As per Claim 44, Fukuta discloses a system interfacing to a network wherein

Fukuta discloses:

a processor coupled to the network (at least col. 15, lines 19-26); and

a memory coupled to the processor (at least col. 15, lines 19-26), the memory

managing congestion in the network, when executed causing the processor to:

receive a congestion status (congestion notice) associated with a node in

the network, the congestion status corresponding to a measured node condition

at the node and being broadcast by the node to at least one other node, the at

least one other node capable of measuring node condition used to indicate node

congestion (at least Fig. 1, 13); and

route a call to the node based on the received congestion status (polling)

(at least Fig. 26; col. 16, lines 21-40).

Fukuta fails to explicitly disclose the congestion status notice being broadcast to

and associated with a node in one of a single peer group and a hierarchical level.

However, the use and advantages for broadcasting such information is well known to

one skilled in the art at the time the invention was made as evidenced by the teachings

of Proctor. Proctor teaches broadcasting a congestion indicator signal, including a flag

indicator, to identify a base station operating in a congested state and states of

neighboring base stations (at least col. 2 line 60 - col. 3 line 4; col. 3 line 66 - col. 4 line

21; also, col. 4, lines 32-65). Therefore, it would have been obvious to one of ordinary

skill in the art at the time the invention was made to incorporate the use of Proctor's

hierarchical broadcasting of such congestion notifications into Fukuta's system as this

would enhance Fukata's system so that the congestion notice is sent not only to the

source node but, for example, to mobile stations at a lower level and also neighboring

base stations within the same peer level in order for affected nodes to be informed and

aware of such network properties affecting communication.

4.   Claims 8-9, 16-17, 25-26, 33-34, 42-43, 50-51, 59-60, and 67-68 are rejected

under 35 U.S.C. 103(a) as being unpatentable over Fukuta in view of Proctor and

further in view of Fedyk et al (hereinafter "Fedyk", 6,560,654).

As per Claims 8, 16, 25, 33, 42, 50, 59, 67.

Fukuta and Proctor fail to disclose the node being one of a private network-to-

network interface (PNNI) node. However, the use and advantages for using such an

interface is well known to one skilled in the art at the time the invention was made as

evidenced by the teachings of Fedyk. Fedyk discloses using a PNNI interface within his

network (at least col. 3, lines 30-45). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to incorporate and implement

the use of a PNNI node in a network being able to monitor and advertise congestion

statuses with other nodes on the network since it would allow for the PNNI node to

operate over existing network implementations and therefore enhance the expendability

and compatibility of Fukuta and Proctor's network.

As per Claims 9, 17, 26, 34, 43, 51, 60, 68.

Fukuta and Proctor fail to disclose the transit flag being one of a PNNI topology

state parameter. However, the use and advantages for using such an interface is well

known to one skilled in the art at the time the invention was made as evidenced by the

teachings of Fedyk. Fedyk discloses using PNNI topology state packets within his

network (at least col. 3, lines 30-45). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to incorporate and implement

the use of a PNNI topology state in an ATM network enabling monitoring and

advertising congestion statuses with other nodes on the network since it would allow for

the PNNI node to operate over existing network implementations and therefore enhance

the expendability and compatibility of Fukuta and Proctor's network by having the PNNI

parameters encapsulated within the packets used on the ATM network.

Response to Arguments

5.   Applicant's arguments filed 26 February 2006 have been fully considered but

they are not persuasive. Applicants argue, substantially, that a) there is no motivation to

combine Fukuta and Proctor as they do not address managing congestion; b) Fukuta

does not suggest broadcasting congestion status to another node; and c) Proctor's

system communicates at the same level and not a hierarchical level.

In response to applicant's argument a) that there is no suggestion to combine the

references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention

where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Proctor clearly

teaches a congestion indicator signal to identify a congestion state of a node while

Fukuta also teaches packet congestion control.

In response to applicant's argument that the references fail to show certain

features of applicant's invention, it is noted that the features upon which applicant relies

(i.e., managing congestion) are not recited in the rejected claim(s). Although the claims

are interpreted in light of the specification, limitations from the specification are not read

into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.

1993).

In response to applicant's arguments, the recitation of managing congestion has

not been given patentable weight because the recitation occurs in the preamble. A

preamble is generally not accorded any patentable weight where it merely recites the

purpose of a process or the intended use of a structure, and where the body of the

claim does not depend on the preamble for completeness but, instead, the process

steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190

USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481

(CCPA 1951).

In response to b), Fukuta teaches broadcasting the congestion status to at least

one other node in the network (at least Fig. 1, 13) as Fukuta teaches broadcasting to

the transmission node, the transmission node/source being a different node than the

node with the congestion. Thus, since it is being broadcast to *one other* node, Fukuta

teaches the broad claim terminology interpreted in the broadest form.

In response to c), As taken from the claims, "a node in *one of* a single peer group

and hierarchical level in the network" (emphasis added). Thus the node can be in a

single peer group **or** hierarchical level. Proctor teaches mobile stations receiving and

base stations broadcasting a congestion status of the base station. As the claim

terminology **is not exclusive**, even *if* such different stations were not to be hierarchical,

as Applicant suggests, such a system would be that of peers and thus as the claim

states of a single peer group, Proctor teaches the limitations of the claims as the base

station would broadcast the congestion status to a peer mobile station. However,

Examiner maintains that the base station is at a higher (hierarchical) level than the

mobile station in the network configuration as typically many mobile stations would

communicate with at least one single or multiple, smaller in scale however, base

station(s) which would communicate with each other over one wired network, for

example. The mobile stations cannot communicate directly with one another, rather they

rely on the base station to communicate with other mobile stations, thus it is easily seen

that the mobile stations and base stations are not at the same level.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Newly cited Aimoto, in addition to previously cited Li ["Every node

in the network constantly assesses the congestion status of its outgoing links and

broadcasts this information to other nodes to which it is directly connected--its neighbor

nodes--via control channels." See col. 3, lines 46-64], Yokotani et al, Kapoor, Masuda et

al, Illiadis et al, Anbiah et al, Cherukuri et al, Gao et al, Yamato et al, Cha et al, Fukuta

et al, Pajuvirta et al, Mairs et al, Daines et al, Song, Murase, Nishihara, Ginossar,

Kirschenbaum, and Milles are cited for disclosing pertinent information related to the

claimed invention. Applicants are requested to consider the prior art reference for

relevant teachings when responding to this office action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Gregory G. Todd whose telephone number is (571)272-

4011. The examiner can normally be reached on Monday - Friday 9:00am-6:00pm w/

first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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Gregory Todd

Patent Examiner

Technology Center 2100

ARIO ETIENNE
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